

WHAT IS CLAIMED IS:

1. An apparatus for selection and detection of at least two spectral regions of a light beam, comprising:
 - means for spectral spreading of the light beam;
 - focusing means for focusing the spectrally divided light beam into a focus line;
 - means, modifiable in their position parallel to the focus line, for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region and
 - a detection device that encompasses means for detecting the first spectral region and means for detecting the reflected spectral region, whereby the detection device is arranged in a plane perpendicular to the focus line
2. The apparatus as defined in Claim 1, wherein the detection device is arranged annularly around the means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region.
3. The apparatus as defined in Claim 1, wherein the means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region are mounted rotatably.
4. The apparatus as defined in Claim 1, further comprising: at least one motorized drive system, with which the means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region are modifiable in their position.
5. The apparatus as defined in Claim 1, wherein a motorized drive system is associated with each means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region.

6. The apparatus as defined in Claim 5, wherein the motorized drive systems are arranged in at least one further plane that is perpendicular to the focus line.
7. The apparatus as defined in Claim 5, wherein the motorized drive systems displace the means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region by way of drive rods or drive tubes
8. The apparatus as defined in Claim 7, wherein the drive rods or drive tubes are bent.
9. The apparatus as defined in Claim 7, wherein the drive rods or drive tubes provide guidance.
10. The apparatus as defined in Claim 7, wherein the means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region are embodied as mirror-coated half-cylinders that are insertable into the drive tubes.
11. The apparatus as defined in Claim 1, wherein the means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region are mirror stops.
12. The apparatus as defined in Claim 11, wherein twenty-six mirror stops are provided and nine means for detection are provided.
13. The apparatus as defined in Claim 1, wherein the means for detection are arranged in an annular chassis.

14. The apparatus as defined in Claim 13, wherein the means for detection can be introduced into the annular chassis parallel to the focus line.
15. The apparatus as defined in Claim 13 further comprising support bases on which the motorized drives are mountable in the annular chassis.
16. A scanning microscope having an apparatus for selection and detection of at least two spectral regions of a light beam comprising:
 - means for spectral spreading of the light beam;
 - focusing means for focusing the spectrally divided light beam into a focus line;
 - means, modifiable in their position parallel to the focus line, for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region and
 - a detection device that encompasses means for detecting the first spectral region and means for detecting the reflected spectral region, whereby the detection device is arranged in a plane perpendicular to the focus line.
17. The scanning microscope as defined in Claim 16, wherein the light beam is a detection light beam.
18. The scanning microscope as defined in Claim 16, wherein the detection device is arranged annularly around the means for blocking out a first spectral region and for reflecting at least a portion of the unblocked spectral region.
19. The scanning microscope as defined in Claim 16, further comprising at least one motorized drive system, with which the means for blocking out a first

5005.1056
H 5652 US

spectral region and for reflecting at least a portion of the unblocked spectral region are modifiable in their position.

20. The scanning microscope as defined in Claim 16, wherein the scanning microscope is a confocal scanning microscope.